

REMARKS

Applicants respectfully submit that no prohibited new matter has been introduced by this Preliminary Amendment.

Support for claim 26, in the method of screening for genetic markers can be found on page 62, under Section D. Support for the use of a collection or "set" of beads can be found on page 37, the paragraph starting at line 6, wherein beads as the solid support to which probe nucleic acids are bound can be found. This paragraph also discusses encoding the beads to determine the identity of the probe on each bead. See also page the paragraph spanning pages 36 and 37, wherin the use of sets of beads is discussed as an alternative substrate to the single solid support embodiment.

Support for the recitation of tens of different genetic markers, hundreds of different genetic markers and thousands of different markers as set forth in claims 27-29 and 48-50 can be found on page 62, line 30. Support for the generation of correlations useful for the detection of a causative mutation, as set forth in claim 30 can be found on page 53, lines 16-19 and page 62, under section D.

Support for the probe length limitations in claims 31-33 can be found on page 49, lines 1-9. Support for the limitation "presence or absence of a particular marker sequence" can be found on page 61, lines 16-17. Support for the label limitation in claims 37, 40, 52 and 55 and the different encoding systems in claim 39 and 54 can be found on page 19, under Section E, page 84, under Section A and on page 37, first full paragraph, respectively.

Support for the claim 42 can be found on page 133, lines 3-4. Support for claim 43 can be found on page 80, lines 29-33 and support for claim 44 can be found on page 63, under Section D.

Claim 46 is supports on page 53, lines 16-19 and page 62, lines 24-27. Support for step (d) can be found on page 62, under section D. Support for claim 47 can be found on page 62, lines 32-35, where a "sufficiently large population" is discussed.

Applicants respectfully request favorable consideration of the pending claims and early indication of its allowability. Should the Examiner find that an interview would expedite prosecution of the present application, he/she is respectfully requested to telephone the undersigned at his/her convenience.

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If there is any fee due in connection with the filing of this Preliminary Amendment,
please charge the fees to our Deposit Account No. 50-0310.

Respectfully submitted,

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Dated: October 20, 2004

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